

WHAT IS CLAIMED IS:

1. A signal traffic routing method for a signaling network, comprising:  
analyzing a signal message when a message transfer unit receives a signal message  
5 and determining a route to a final destination of the received signal message;  
selecting a link for transferring a signal message at a link set of the determined route  
based on a link determination history and link determination data; and  
transferring a signal message through the selected link.
- 10 2. The method according to claim 1, further comprising updating the link  
determination history and link determination data based on the selected link.
- 15 3. The method of claim 1, wherein the message distribution unit transfers a signal  
message to a user part of a local system; the message discriminating unit analyzes the  
received message and checks whether the final destination of the message is a local system;  
and the message routing unit routes the message to a route connected with a neighboring  
signal transfer point transfers the message to the final destination.
- 20 4. The method of claim 1, wherein a routing label of the signal message includes  
a 4-bit Signaling Link Selection, a 14-bit origination point code and a 14-bit destination point  
code.

5. The method of claim 1, wherein said step for determining the route comprises receiving a signal message, analyzing a routing label, transferring to a corresponding message to the message transfer unit when the final destination is a local system and providing the corresponding message to a user part.

6. The method of claim 1, wherein said step for determining the route comprises receiving a signal message, analyzing a route label, transferring a corresponding message to the message routing unit when the final destination is not the local system and determining a route based on the message destination.

7. The method of claim 1, wherein said step for selecting the link comprises checking a link determination history and whether a signal message having the same link selection field as the link selection field of the signal message currently received from the link set of the previously determined route is routed.

8. The method of claim 1, wherein said step for checking whether the signal message is routed comprises:

determining a link of the link determination history as a link for transferring the received message when the signal message is routed at the link set; and

determining the link of the link determination data as a signal link for transferring the received signal message when the signal message is not routed.

9. The method of claim 2, wherein said step for updating comprises judging whether the link that transfers the received signal message is a link of the link determination history.

5 10. The method of claim 9, wherein said step for judging whether the link is a link of the link determination history comprises:

setting the signal link determination history by a previous value when the link is determined as a signal link of the link determination history and updating the signal link determination data as a next time available signal link except for the signal link determination history; and

10 setting the signal link determination history by the signal link determination data in the case that the signal link is determined as a signal link of the signal link determination data and updating the signal link determination data with the next time available signal link.

15 11. The method of claim 1, wherein said link determination history comprises a variable that represents that the signal message having a corresponding routing label is routed through a corresponding link.

20 12. The method of claim 1, wherein said link determination data comprises a variable that represents a link available in the link set when determining the next link.

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13. A signal traffic routing method for a signaling network, comprising:  
receiving a signal message at a signal transfer point, analyzing a routing label of the  
receiving message and determining the final destination;  
analyzing whether the final destination of the received signal message is a local  
5 system based on a result of the analysis;  
transferring the received signal message to the message routing unit when the final  
destination is not the local system;  
setting a signal route for transferring the signal message using a Signaling Link  
Selection of the routing label by the message routing unit;  
10 selecting a link of the signal message in the link set of the set route and determining  
a link using the link determination history and link determination data; and  
updating the link determination history data based on the determined link.

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14. The method of claim 13, wherein the message transfer unit includes a message  
15 discriminating unit, a message distributing unit and a message routing unit.

15. The method of claim 13, wherein said routing label comprises:  
a signaling link selection bit;  
an originating point code; and  
20 a destination point code.

16. The method of claim 13, wherein said step for analyzing whether the final message is a local system comprises:

transferring a message to an operation unit when the final message destination is a local system; and

5 transferring the message to the message routing unit when the final message destination is not the local system.

17. The method of claim 13, wherein said step for selecting the link comprises:

checking the link determination history, analyzing whether the signal message is  
10 routed based on the same Signal Link Selection as the current Signal Link Selection and routing the message through the link of the link determination history for obtaining a stable route of the data in the case that the signal message is routed in the past; and

determining the link of the Signal Link Selection as a signal link in the case that the signal message is not routed in the past.

18. The method of claim 13, wherein said link determination data and link determination history comprises:

a link determination history which is a variable representing that a signal message having a corresponding label is routed thorough a corresponding link; and

20 a link determination data which is a variable representing an available link used when determining the next link.

19. The method of claim 13, wherein said message transfer unit comprises:  
a message distributing unit that transfers a signal message to a user part of the local system;

a message discriminating unit that analyzes a message received from a message transfer unit and checks whether a final destination of the message is a local system; and  
5 a message routing unit that routes the message to a route connected with a neighboring signal transfer point to transfer the message to the final destination.

20. A signal traffic routing apparatus for a signal network, comprising:  
means for analyzing a signal message when a message transfer unit receives a  
10 signal message and determining a route to a final destination of the received signal message;

means for selecting a link for transferring a signal message at a link set of the determined route based on a link determination history and link determination data; and

15 means for transferring a signal message through the selected link.

21. The signal traffic routing apparatus of claim 20, wherein the message transfer unit comprises:

message distributing means for transferring a signal message to a user part of the  
20 local system;

